



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Att'y. Dkt. No. 039768-0101

Applicant: Sung-Soo KIM

Title: SEAT BELT WITH PRINTED FACE AND PRINTING  
METHOD THEREOF

Appl. No.: 09/783,392

Filing Date: February 15, 2001

Examiner: Peter R. Brown

Art Unit: 3636

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Commissioner for Patents

PO Box 1450

Alexandria, Virginia 22313-1450

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APPEAL BRIEF

Sir:

This Brief on Appeal is timely filed in triplicate under the provisions of 37 CFR § 1.192 following the Notice of Appeal filed September 11, 2003. The requisite fee for this Brief also accompanies this paper. By this Brief, the authorities and arguments on which the Appellants will rely to maintain this appeal are set forth. As required by Rule 192(c), the Brief contains the following items under appropriate headings and in the order there indicated.

I. REAL PARTY IN INTEREST

The real party of interest is the named inventor:

11/12/2003 JBALINAN 00000003 09783392

01 FC:1402

330.00 DP

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## II. RELATED APPEALS AND INTERFERENCES

No other appeal or interference that would directly affect or have an effect or bearing on the Board's decision with this appeal exists.

## III. STATUS OF THE CLAIMS

Claims 1-10 are pending in this application. Claim 8 is withdrawn from consideration. The final rejection of claims 1-7 and 9-10 is appealed.

## IV. STATUS OF THE AMENDMENTS

In an after final amendment, claim 5 was amended to correct a minor oversight and to establish a proper antecedent basis with respect to the subject matter of claim 2 from which claim 4 depends. Claim 8 was, irrespective of its withdrawn status, amended to depend from claim 1, to facilitate its rejoinder and allowance.

## V. SUMMARY OF THE INVENTION

The invention pertains to a seat belt, which as set forth on page 2, lines 11-20, is such that it is capable of conspicuously providing both an elegant appearance and good reliability by forming a printed face at the outer side of a seat belt. This printed face is a character, a mark or a pattern which is solidly displayed and which, in addition to its general dimple function, is capable of facilitating putting on and taking off the seat belt by preventing user's hands from slipping. In addition to this, the invention maintains the general function of the seat belt and is capable of maintaining a durable printed face without loss of the adhesive strength characteristics of the printed ink. The invention also includes the method of printing.

As set forth on page 2, lines 21-24, another facet of the invention resides in a polyester seat belt with printed surface wherein a character, a mark or a pattern is

solidly displayed, the printed surface being maintained durably without being detached, and its printing method.

Page 7, lines 20-22, discloses how a printed face 210 which is embossed on the upper surface of the seat belt 200, is such that, when the user puts on the seat belt, it enables the user to grasp the seat belt without the user's hand slipping, thus facilitating the seat belt being easily put on and/or taken off.

#### VI. REFERENCES OF RECORD

- 1) Australian Patent Specification No. 262321 to Cave
- 2) British Patent No. 2186612 A to Miyamoto

#### VII. ISSUES

The sole issue upon appeal is whether the Examiner erred in finally rejecting claims 1-7, 9 and 10 under 35 USC § 103(a) as being unpatentable over either of Cave or Miyamoto.

#### VIII. GROUPING OF CLAIMS

The claims are not grouped and are deemed to be individually patentable. The reasons that each of the claims are deemed patentable will be set forth below under the heading of "Arguments."

#### IX. ARGUMENTS

The Examiner erred in rejecting claims 1-7, 9 and 10 under 35 USC § 103(a) as being unpatentable over either of Cave or Miyamoto.

In order to establish a *prima facie* case of obviousness, it is necessary to show that the hypothetical person of ordinary skill would, without any knowledge of the

claimed subject matter and without any inventive activity, be able to arrive at the claimed subject matter given the guidance of the cited references when each is fully considered.

This rejection is based on the unsupported premise that both Cave and Miyamoto disclose providing characters, marks or patterns on a seat belt and that a belt with such indicia may be readily grasped and would “*inherently*” prevent or at least lessen to some degree, slippage out of a user’s grasp. The rejection further advances that the material of the seat belt is considered to be a matter of design choice as is the type of material of the characters or marks and the manner in which they are applied to the seat belt.

This position is respectfully traversed.

It is firstly submitted that “inherency” cannot be applied under 35 USC § 103 and is a doctrine limited only to anticipation rejections.

Further, for something to be “inherent” it must necessarily happen in all cases (each and every time) not just in some instances. In some cases it can be advanced that the belt treatments which are disclosed in these two references may actually produce a smoother more slippery surface than that of the untreated belt surface. There is, therefore, nothing to support the conjecture on which the rejection is based. That is to say, there is nothing to support the position that a better grip would be “inherently” produced by the surface treatments disclosed in Cave or Miyamoto in each and every instance.

In more detail, the Australian Patent Specification 262321 to Cave, discloses a seat belt which is provided with a fiber pile for the purposes of attenuating the detrimental effect of a normal type seat belt rubbing abrasively on the user’s clothing. The pile is preferably formed on both sides and is arranged to adhere to the clothing of the wearer. While the pile can be patterned, this patterning is intended only to provide aesthetic value and has no other disclosed function.

Indeed, there is no disclosure in Cave, that the pile has any effect on the grip applied as a person attempts to grip and manipulate the belt. The pile, which must be presumed to partially penetrate and therefore adhere to the wearer's clothes can be likened to short bristles on a brush. The question which needs to be dealt with in this instance is whether the bristles are easier to grasp than the bristle-free handle of the brush. The fact that the pile can act like a hook and eye (Velcro®) arrangement on clothing has nothing to do with the grip between a human hand and the pile covered belt.

It is submitted that the pile of the arrangement which is disclosed in this reference actually reduces the amount of surface-to-surface contact friction between a smooth surface such as the skin on a person's fingers or the leather of a glove in which the hand is disposed. Slick racing tires have more surface area in engagement with the road surface and therefore more grip than grooved wet weather tires. Each fiber on the pile has a gap between it and the next fiber. Even if the pile bends when gripped it still fails to provide the same surface area as the belt webbing which, while not being perfectly flat itself, is far less resilient than a flexible pile and therefore apt to produce a higher coefficient of friction.

Without any disclosure as to the coefficient of friction which is produced by the pile, it cannot be simply assumed that a better grip will result from the treatment which is disclosed in this reference to Cave.

It is again submitted that a fiber pile is not suggestive of a printed surface such as claimed and is in fact such as lead away from a smooth surface and toward one composed of a myriad of fine flexible members. In contrast, the claimed printing on belt webbing will tend to fill in the gaps in the webbing and will tend to produce a flatter surface which will therefore tend to exhibit a greater surface area which available to be actually contacted by a user's fingers/hand.

The reference to Cave neither discloses nor suggests the claimed "printed means for preventing slippage" and therefore cannot be used to reject claim 10.

GB 2186612 A to Miyamoto discloses a high visibility material formed on the belt at a location which different from that which is grasped when putting on or taking off the seat belt. The purpose of the belt arrangement disclosed in this reference is also different from that of the claimed subject matter. In Miyamoto, the object is to render the belt easily visible from outside of the vehicle and therefore focuses on portions of the belt which are located high enough to be visible from outside the vehicle such as those portions which pass over shoulder and/or extend into clear view.

There is nothing in this reference which would lead the hypothetical person of ordinary skill to the conclusion that the highly visible surface treatment is not in fact more slippery than the untreated belt surface – noting again that it is not located in areas which are normally gripped. For example, if the surface treatment includes smooth and therefore reflective material (as can be assumed in the case that a highly visible belt portion is produced in accordance with the teachings of this reference), and unless deliberate steps are taken to prevent the same, the coefficient of friction may very well be lower than the normal belt surface and therefore actually be less easy to grasp hold of.

It is submitted that this rejection is based on the unsupported premise that what is disclosed would produce a less slippery more reliable gripping surface. However, the only suggestion of this property comes from the Applicant's disclosure and not from the art of record.

In rejecting claims under 35 U.S.C. §103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See *In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert.

denied, 488 U.S. 825 (1988); *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

The Miyamoto neither discloses nor suggests the claimed "printed means for preventing slippage" and therefore cannot be used to reject claim 10.

The rejection is further traversed in that it does not address the specific requirements of claim 2 which calls for the printed face to be made of silicon rubber.

The rejection is also traversed in that the rejection does not address the specific requirements of claim 5 which calls for a silicon composition which comprises 8~15 wt % of silicon oil, 2~10 wt % of epoxy silane, 0.5~1.0 wt % of amino silane, 0.1~0.4 wt % of platinum catalyst, 0.3~1.0 wt % of pigment, 1~8 wt % of calcium carbonate (CaCO<sub>3</sub>), 2~10 wt % of silica 200 mesh or 300 mesh, for a silicon liquid phase rubber 100 wt %.

At the very least, the subject matter of claim 5 could not result from a simple design choice as alleged in this rejection.

#### Arguments Pertaining to Individual Claim Patentability

In order to support the position that the grouped and non-grouped claims are individually patentable, each of the claims on appeal will be discussed in order, even though there may be some repetition/redundancy in the arguments which are presented.

Claim 1 is patentable over the art in that it calls for a seat belt with a printed face for a vehicle, in which a printed face of a character, a mark and a pattern is formed on one face of the seat belt formed a band shape woven with polyester at a location selected to be grasped by a user when fastening the seat belt, the printed face being embossed to prevent slippage from the user's grip and to facilitate the putting on and

taking off of the seat belt. As advanced above, this is neither disclosed nor suggested by either of the references cited against the claimed subject matter.

Claim 2 is patentable over the art for at least the reason that this claim calls for the printed face to be made of silicon rubber. Neither of the references to Cave or Miyamoto disclose the use of this type of rubber. In fact, Cave teaches toward the use of a pile material and therefore must be seen as teaching away from the claimed silicon rubber. It is submitted that a reference must be considered for all it teaches, including disclosures that teach away from the invention as well as disclosures that point toward the invention. *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.* 776 F.2d 281, 227 U.S.P.Q. 657 (Fed. Cir. 1985).

Claim 3 is patentable over the art for at least the reason that the printed face is made of sol ink. Neither of Cave or Miyamoto disclose the use of this material and as noted above, the pile of Cave would have to be seen as teaching away from this type of ink.

Claim 4 is patentable over the art in that it calls for the printed face to be formed with a multicolor printed pattern. There is no suggestion of this structure in Cave. The pile of Cave is not suggestive of a multicolor printed pattern. In Miyamoto the highly visible material is to be attached by stitching or chemical bonding (c.f. printing), to render the belt easily visible from outside of the vehicle and therefore focuses on portions of the belt which pass over shoulder and/or extend into clear view. This teaches away from a position which is apt to grasped and toward one which is much higher on the belt. Miyamoto, on the other hand, is such as to disclose a "highly visible material." Just what this is meant to entail is not clear from the the very brief disclosure carried in this document. However, there is no discussion of multicolor and nothing to suggested that a pattern should be formed of different colors.

Claim 5, as noted above, is patentable over the art applies in that it calls for the above mentioned silicon rubber to comprise 8~15 wt % of silicon oil, 2~10 wt % of epoxy silane, 0.5~1.0 wt % of amino silane, 0.1~0.4 wt % of platinum catalyst, 0.3~1.0 wt % of pigment, 1~8 wt % of calcium carbonate ( $\text{CaCO}_3$ ), 2~10 wt % of silica 200 mesh or 300



mesh, for a silicon liquid phase rubber 100 wt %. There is absolutely no disclosure of this type of formulation in either of Cave or Miyamoto. It is again pointed out that these requirements have not been addressed in the rejection.

Claim 6 is patentable over the art in that it calls for the printed face to be formed by silk printing. Silk printing is neither disclosed nor suggested in either of Cave or Miyamoto.

It is submitted that in connection with the subject matter of this, as well as the other finally rejected claims, when levying an obviousness rejection under 35 U.S.C. 103, the Examiner has the burden of establishing (1) some suggestion or motivation to modify the reference or to combine reference teachings, (2) a reasonable expectation of success, and (3) that the prior art references teach or suggest all the claim limitations. See MPEP §2143 (Aug. 2001). "Both the suggestion and the reasonable expectation of success must be founded in the prior art, not in the applicant's disclosure." *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claim 7 is patentable over the art in that it calls for the printed face to be formed by a decalcomania. No suggestion of decalcomania is found in the art applied.

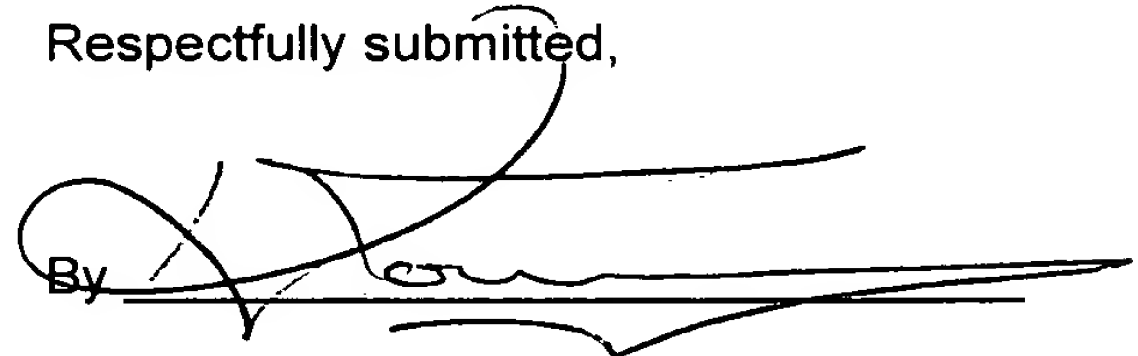
Claim 9 is patentable over the art in that it calls for the printed face to be formed with a multicolor printed pattern. This claim inherits all of the limitations of claims 1 and 3 is therefore patentable for at least the same reasons that the subject matter of these claims is patentable.

Claim 10 is patentable over the art in that it calls for a seat belt comprising: a band of woven polyester; and printed means for preventing slippage from the user's grip and to facilitate the putting on and taking off of the seat belt provided at location on the belt selected to be grasped by a user when fastening the seat belt. As noted above, there is no disclosure of printed means for preventing slippage from the user's grip disclosed in either of Cave or Miyamoto.

Conclusion

It is submitted that a *prima facie* cases of obviousness has not been established for at least the reasons advanced above. It is respectfully submitted that the rejections which have been levied against the appealed claims are not tenable for at least the reasons advanced above. It is therefore respectfully requested that these rejections be reversed, the pending claims be allowed and the application passed to issue.

Respectfully submitted,

By 

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APPENDIX  
CLAIMS ON APPEAL

1. A seat belt with a printed face for a vehicle, in which a printed face of a character, a mark and a pattern is formed on one face of the seat belt formed a band shape woven with polyester at a location selected to be grasped by a user when fastening the seat belt, the printed face being embossed to prevent slippage from the user's grip and to facilitate the putting on and taking off of the seat belt.
2. The seat belt of claim 1, wherein the printed face is made of silicon rubber.
3. The seat belt of claim 1, wherein the printed face is made of sol ink.
4. The seat belt of claim 1, wherein the printed face is formed with a multicolor printed pattern.
5. The seat belt of claim 2, wherein the silicon rubber comprises 8~15 wt % of silicon oil, 2~10 wt % of epoxy silane, 0.5~1.0 wt % of amino silane, 0.1~0.4 wt % of platinum catalyst, 0.3~1.0 wt % of pigment, 1~8 wt % of calcium carbonate ( $\text{CaCO}_3$ ), 2~10 wt % of silica 200 mesh or 300 mesh, for a silicon liquid phase rubber 100 wt %.
6. The seat belt of claim 1, wherein the printed face is formed by silk printing.
7. The seat belt of claim 1, wherein the printed face is formed by a decalcomania.
8. (Withdrawn) A method for printing a seat belt with a printed face for a vehicle according to claim 1, in which the seat belt which is made of polyester is conveyed along with a conveyor, and while being conveyed, one face of the seat belt is subject to multicolor-printing and drying by means of print units and dry units respectively installed at equal intervals on the convey path of the conveyor.
9. The seat belt of claim 3, wherein the printed face is formed with a multicolor printed pattern.

10. A seat belt comprising:
  - a band of woven polyester; and
  - printed means for preventing slippage from the user's grip and to facilitate the putting on and taking off of the seat belt provided at location on the band selected to be grasped by a user when fastening the seat belt.